

C60N circuit-breakers

B, C and D curves

IEC 898: **6000 A**, IEC 947-2: 10 kA

functions

The circuit-breakers combine the following functions:

- protection of circuits against short-circuit currents,
- protection of circuits against overload currents,
- control,

- isolation,
- protection of persons against indirect contact with TN and IT earthing systems.

C60N circuit-breakers are used in the tertiary and industrial sectors.

description

technical data common to C60N circuit-breakers

■ power circuit

□ voltage rating: 440 V AC

□ breaking capacity according to IEC 947-2, Icu ultimate breaking capacity (O-CO cycle):

rating (A)	type	voltage (V)	breaking capacity Icu (kA)
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0.5...63	1P	230...240	10
		400...415	3 (1)
	1P + N, 2P, 3P, 4P	230...240	20
	2P, 3P, 4P	400...415	10

(1) breaking capacity under 1 pole with IT isolated neutral system (case of double fault).

□ limitation class (IEC 898): 3

□ number of cycles (O-C): 20 000

■ environment

□ tropicalisation: treatment 2 (relative humidity: 95 % at 55 °C)

□ connection: tunnel terminals for the following cables:

- 16 mm² flexible or 25 mm² rigid up to 25 A ratings
- 25 mm² flexible or 35 mm² rigid for 32 to 63 A ratings.

rating (A)	type	voltage (V)	breaking capacity Icn (A)
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10...63	1P	230...400	6 000
	1P + N	230	6 000
	2P, 3P, 4P	400	6 000

□ limitation class (IEC 898): 3

■ vikt (g)

typ	1P	2P	3P	4P
	120	240	360	480

catalogue numbers



23922



23948

type	rating (A)	width in mod. of 9 mm	cat no	EAN13 no	cat no	EAN13 no	cat no	EAN13 no
B curve C60N				C curve C60N		D curve C60N		
1P	0,5	2			24067	1234567891234		
	1	2			24305		24625	1234567891234
	2	2			24306		24626	
	3	2			24307		24727	
	4	2	23975		24308		24928	
	6	2	23976		24309		24629	
	10	2	23977		24310		24630	
	16	2	23979		24311		24632	
	20	2	23980		24312		24633	
	25	2	23981		24313		24634	
	32	2	23982		24314		24635	
	40	2	23983		24315		24636	
	50	2	23984		24316		24637	
	63	2	23985		24317		24638	
1P + n	1	4	25953		25968			
	2	4	25954		25969			
	3	4	25955		25970			
	4	4	25956		25971			
	6	4	25957		25972			
	10	4	25959		25974			
	13	4	25960		25975			
	16	4	25961		25976			
	20	4	25962		25977			
	25	4	25963		25978			
	32	4	25964		25979			
	40	4	25965		25980			
	50	4	25966		25981			
	63	4	25967		25982			

Section 3—IEC 60947-2 Rated Protection Devices

The Multi 9 system includes several families of miniature circuit protection devices that have the IEC ratings that are applicable in many countries other than the United States. These products are summarized below and discussed in more detail in the following pages. UL Listed and UL Recognized protection devices are described in Section 2, while accessories for both UL Listed and IEC Certified products are described in Section 5.

Table 15: Specifications for IEC Rated Miniature Circuit Breakers

Ratings per IEC 60947-2		DPN-N	C60N		C60H		C60L				C120H, NC125H	
Number of Poles		1 (Ø + N)	1	2, 3, 4	1	2, 3, 4	1	2, 3, 4			1	2, 3, 4
Rated Current 25°C (77°F) I_n		1–40 A	0.5–63 A	0.5–63 A	0.5–63 A	0.5–63 A	0.5–63 A	0.5–25 A	32–40 A	50–63 A	—	—
Rated Current (A) 40°C (104°F) I_n		—	—	—	—	—	—	—	—	—	10–125	10–125
Rated Voltage U_e		230 V	440 V	440 V	440 V	440 V	440 V	440 V	440 V	440 V	440 V	440 V
Ultimate Breaking Capacity (I_{cu}) as per IEC 60947-2 Standard	130 Vac	—	—	—	30 kA	—	—	—	—	—	30 kA	—
	230–240 Vac	7.5 kA	10 kA	20 kA	15 kA	30 kA	25 kA	50 kA	40 kA	30 kA	15 kA	30 kA
	400–415 Vac	2 ¹ kA	3 ¹ kA	10 kA	4 ¹ kA	15 kA	6 ¹ kA	25 kA	20 kA	15 kA	4 ¹ kA	15 kA
	440 Vac	—	—	6 kA	—	10 kA	—	20 kA	15 kA	10 kA	—	10 kA
	1P 60 Vdc	—	15 kA	—	20 kA	—	25 kA	—			—	—
	2P 125 Vdc	—	—	2P 20 kA	—	2P 25 kA	—	2P 30 kA			—	—
		—	—	3P 30 kA	—	3P 40 kA	—	3P 50 kA			—	—
	3P 250 Vdc	—	—	4P 40 kA	—	4P 50 kA	—	4P 60 kA			—	—
Service Breaking Capacity	I_{cs} (% I_{cu})	50%	75%	75%	50%	50%	50%			—	75%	75%
Magnetic Trip Curves	B Curve	3–5	3–5		3–5		3.2–4.8				3.2–4.8	
	C Curve	7–10	7–10		7–10		7–10				7–10	
	D Curve	—	10–14		10–14		10–14				10–14	
	K Curve	—	—		—		10–14				—	
	MA Curve	—	—		—		12				—	
	Z Curve	—	—		—		2.4–3.6				—	

¹ Single pole breaking capacity for IT type European grounding system (insulated neutral-double fault).

Table 16: Dimensions and Weights

Device	Size	Height		Width		Depth		Weight	
		in.	mm	in.	mm	in.	mm	oz.	g
DPN-N	1P	3.19	81	0.71	18	3.00	76	4.23	120
C60N	1P	3.19	81	0.71	18	3.00	76	3.88	110
	2P	3.19	81	1.42	36	3.00	76	7.75	220
	3P	3.19	81	2.13	54	3.00	76	11.64	330
	4P	3.19	81	2.48	72	3.00	76	15.52	440
C60H	1P	3.19	81	0.71	18	3.00	76	4.23	120
	2P	3.19	81	1.42	36	3.00	76	8.47	240
	3P	3.19	81	2.13	54	3.00	76	12.70	360
	4P	3.19	81	2.48	72	3.00	76	16.93	480
C60L	1P	3.19	81	0.71	18	3.00	76	4.23	120
	2P	3.19	81	1.42	36	3.00	76	8.47	240
	3P	3.19	81	2.13	54	3.00	76	12.70	360
	4P	3.19	81	2.48	72	3.00	76	16.93	480
C120H/NC125H	1P	3.19	81	0.71	27	3.00	76	6.35	180
	2P	3.19	81	2.13	54	3.00	76	12.70	360
	3P	3.19	81	3.19	81	3.00	76	19.05	540
	4P	3.19	81	4.25	108	3.00	76	25.40	720